

**ABSTRACT OF THE DISCLOSURE**

1           In a multi-layer telecommunications system which includes an application layer  
2 and a transport layer, differing transport technologies are interworked without  
3 terminating the application layer signaling or without involving a technology  
4 interworking in the control plane of the application layer (e.g., without interworking in  
5 the application signaling). In various illustrated embodiments, the application layer is a  
6 radio network layer of a wireless telecommunications system. In at least some  
7 embodiments of the present invention a transport layer interworking function is situated  
8 on an interface between two nodes of the radio access network (RAN). The  
9 interworking function can be located in a separate node which may be a node having  
10 both ATM and internet protocol (IP) interfaces. There are numerous modes of  
11 implementing the interworking of the present invention, regardless of which interface is  
12 affected (e.g., an Iur interface, an Iu interface, or an Iub interface). A first interworking  
13 mode involves interworking with q.aal2 signaling. There are various ways or options of  
14 implementing the interworking with q.aal2 signaling. A first such example option is to  
15 use an IP specific signaling protocol over the IP network. A second example option is  
16 to use q.aal2 signaling over the IP network to/from the IP node. In one of its aspects,  
17 the present invention also provides an optimization feature in the event that nodes on  
18 both side of the interface (Iu interface, Iur interface, or Iub interface) are IP-connected  
19 nodes. Another interworking mode involves obtaining address and binding identifier  
20 parameters to be included in application signaling messages by consulting a transport  
21 layer interworking gateway. Yet another mode of implementing interworking for the  
22 present invention involves tunneling.  
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